MOOSE HARVEST

1989 – New Brunswick

Gerald Redmond
Fish & Wildlife Branch
Dept. of Natural Resources & Energy
Box 6000, Fredericton, N.B. E3B 5H1

SUMMARY

The 1989 moose season proved to be the most successful on record. A total of 2,022 moose were killed during the three day hunt. Only 28,895 residents applied to hunt moose in 1989, down from about 36,000 applicants the previous year. The reduction in applicants may be attributed to the increase in license fees for moose hunters.

For the sixteenth consecutive year, a quota of 6,000 permits were chosen in a random draw. Hunters under the age of 65, who held a moose license during the previous 5 years, were not eligible to enter the draw. Beginning in 1989, applicants who were 65 years of age or older were permitted to enter the draw each year. Applicants who were selected in the draw and had not previously held a moose license in New Brunswick, were obliged to successfully pass a written moose hunter test and a shooting test. This resulted in a total of 5,243 applicants purchasing a moose license in 1989.

In 1989, licensed hunters could harvest one moose of either sex and any age.

Season dates for 1989 were:	September 27, 28, 29
License fee:	$50.00
Eligibility:	Residents only Successful completion of written and shooting test

The 1989 harvest (2,022) represented a hunter success rate of 39 percent; the highest since the 3 day season was implemented in 1974. During a brief three day hunt, weather conditions can have a large influence on moose kill. Throughout most of New Brunswick, weather conditions were nearly perfect for moose hunting in 1989 which contributed to the increased harvest.

The average hunting effort required to harvest a moose was 12.6 hours in 1989, compared to 15.1 hours in 1988. Successful hunters spent an average of 4.2 hours hunting each day, whereas the 3,221 unsuccessful hunters were afield for approximately 9.5 hours per day. This represents approximately 117,762 hours of moose hunting recreation during 1989.

The East Fundy Moose Management Zone (Wildlife Management Zone 24) was closed to moose hunting beginning in 1989 because of the steady decline of the moose herd in that area. An aerial census was undertaken during February and March 1990 to estimate the moose population. This management zone will remain closed until the area can sustain a controlled hunt. The objective is to census the area every 2 years to monitor the response of the closure.

1989 marked the second year of closure for the Lakestream Moose Study Area (Wildlife Management Zone 18). The objective is to determine the impact of hunting on the moose population in this zone. A population model developed for this area predicts that the population can be doubled during a 5 year closure period. An aerial census conducted in February and March 1989 indicated that the population had increased after the first year of closure. During January to March 1991, this zone will be re-censused to determine how the moose population has responded to three years of closure. It is expected that this area will remain closed to moose hunting until the 1993 season.

Thanks are extended to all D.N.R.& E. field staff who contributed to the moose data collection program during 1989, and to all hunters who cooperated in our moose management program.

NUMBER OF MOOSE APPLICATIONS, LICENSES ISSUED, AND HARVEST

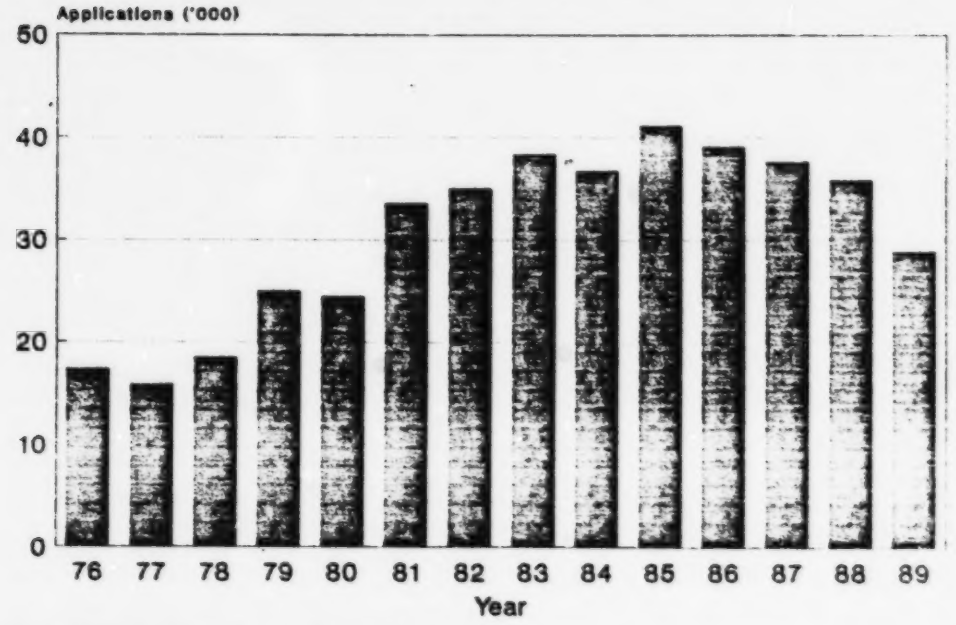
NEW BRUNSWICK, 1960 - 1989

Year	No. of Applications	Applications Selected	No. Licences Issued	No. Moose Harvested
[Moose season closed in 1936 and re-opened in 1960]				
1960	8,321	400	383	174
1961	17,221	800	771	262
1962	16,354	1,000	963	297
1963	16,359	1,000	1,000	296
1964	17,380	1,000	1,000	307
1965	18,460	1,000	1,000	314
1966	26,500	1,000	1,000	606
1967	16,500	1,000	1,000	469
1968	12,724	1,500	1,500	724
1969	16,009	1,600	1,566	707
1970	14,016	2,000	1,959	858
1971	18,334	2,000	1,959	931
1972	21,639	2,500	2,441	1,043
1973	31,558	2,500	2,460	1,127
1974*	39,157	6,000	5,580	1,085
1975	17,587	6,000	4,528	969
1976	17,347	6,000	4,753	1,131
1977	15,815	6,000	4,746	1,246
1978	18,547	6,000	4,604	1,547
1979	25,007	6,000	4,786	1,360
1980	24,503	6,000	4,935	1,230
1981	33,500	6,000	4,892	1,436
1982	35,000	6,000	5,032	1,344
1983	38,302	6,000	5,065	1,287
1984	36,727	6,000	5,175	1,618
1985	41,104	6,000	5,063	1,346
1986	39,127	6,000	5,228	1,625
1987	37,625	6,000	5,210	1,838
1988	35,890	6,000	5,185	1,473
1989**	28,895	6,000	5,243	2,022

* 3 day season begins

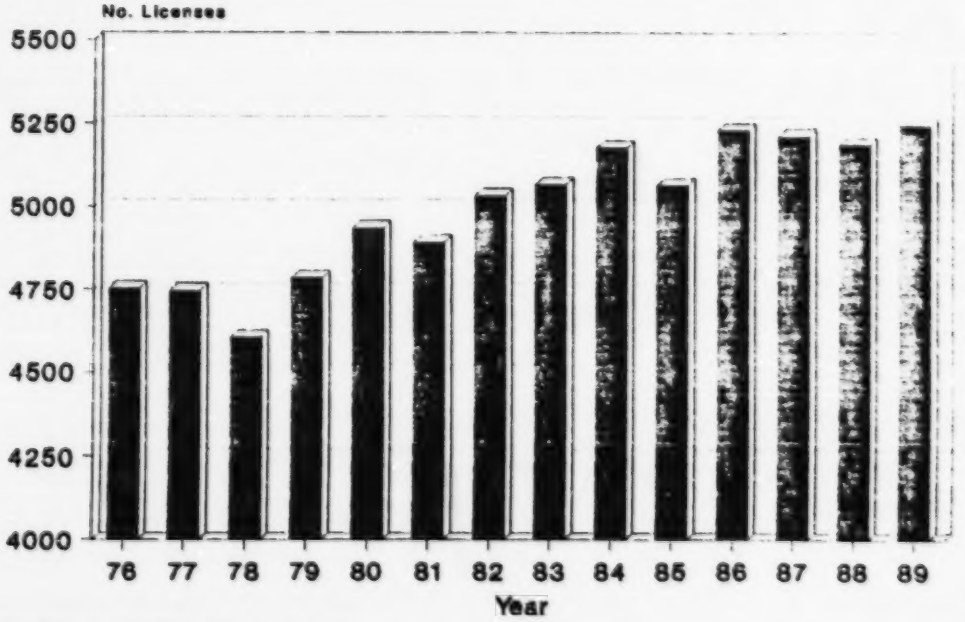
** Moose licence fee increased from $25 to $50.
Residents 65 years of age and older were eligible to apply each year.

MOOSE HUNTING APPLICATIONS
1976 - 89 New Brunswick



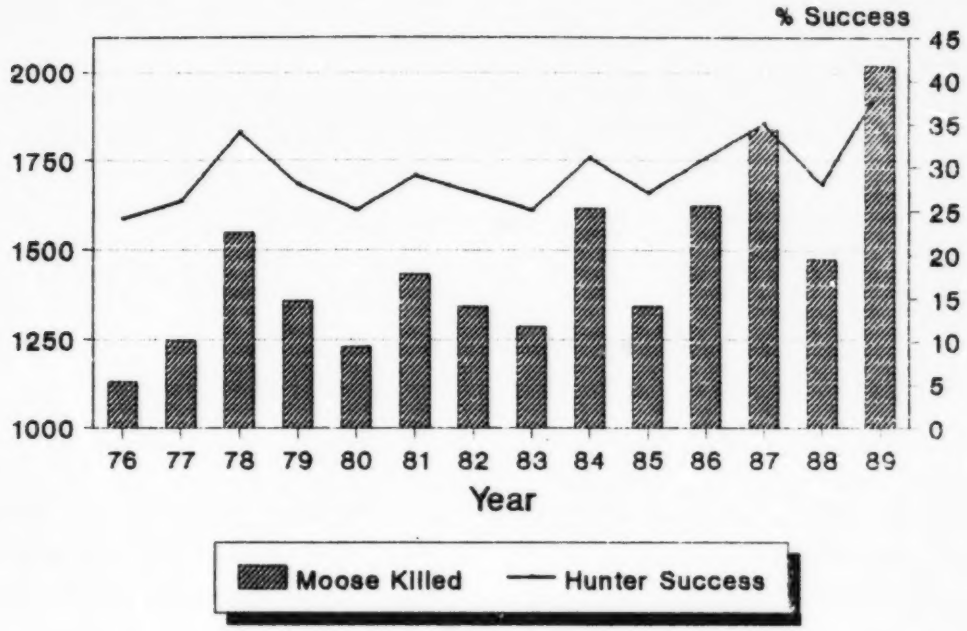
-licence holders wait 5 yrs. to reapply.

MOOSE HUNTING LICENCES ISSUED
1976 - 89 New Brunswick

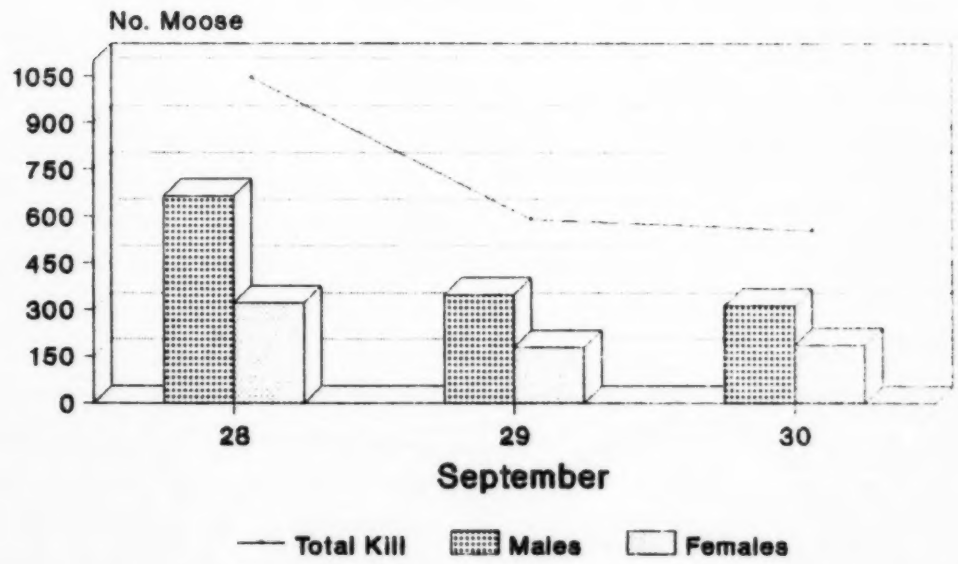


-shooting & written test required.

MOOSE HARVESTED & HUNTER SUCCESS RATES
1976 - 89 New Brunswick



MOOSE KILL BY DAY
1989
New Brunswick



COUNTIES OF NEW BRUNSWICK

INDEX OF MOOSE HUNTING PRESSURE[1]

FOR COUNTIES OF NEW BRUNSWICK

1980 - 89

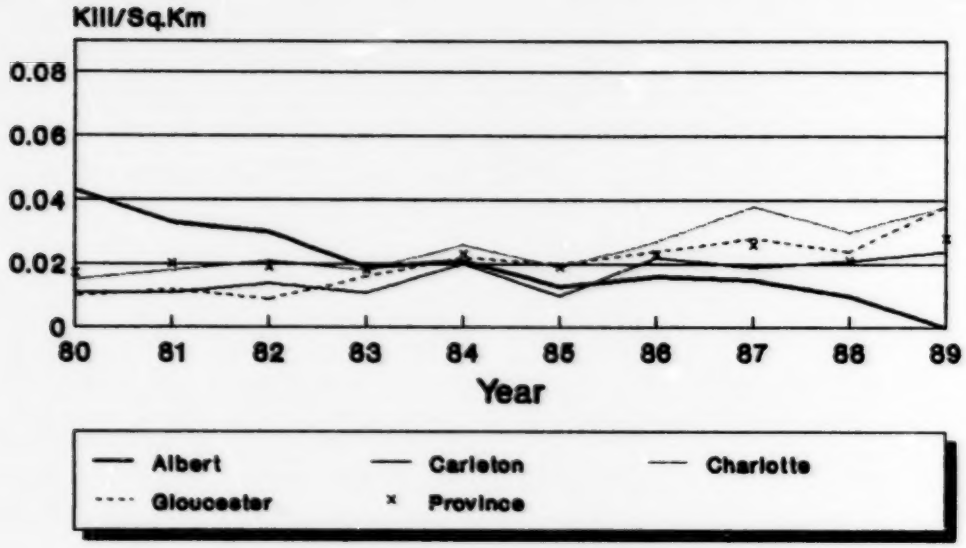
COUNTY	HOURS HUNTED / KM²										10 YEAR AVE.
	80	81	82	83	84	85	86	87	88	89	
Albert	.5	.4	.4	.2	.3	.2	.2	.2	.2	0	.3
Carleton	.1	.2	.2	.2	.3	.2	.3	.3	.3	.3	.2
Charlotte	.2	.2	.3	.3	.3	.2	.3	.5	.4	.5	.3
Gloucester	.1	.1	.1	.2	.2	.2	.3	.4	.3	.5	.2
Kent	.2	.3	.4	.3	.4	.3	.3	.4	.3	.3	.3
Kings	.2	.3	.2	.2	.3	.2	.2	.3	.3	.3	.2
Madawaska	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Northumberland	.3	.3	.3	.3	.3	.3	.4	.4	.4	.5	.4
Queens	.2	.2	.3	.2	.3	.4	.5	.4	.2	.3	.3
Restigouche	.1	.1	.1	.1	.1	.1	.2	.2	.2	.3	.2
St. John	.6	.4	.7	.5	1.1	.7	1.0	1.0	.5	1.0	.8
Sunbury	.3	.3	.3	.2	.2	.2	.4	.4	.2	.5	.3
Victoria	.1	.1	.1	.1	.1	.1	.2	.2	.1	.1	.1
Westmorland	.2	.4	.3	.4	.3	.2	.3	.2	.1	.1	.2
York	.2	.2	.2	.2	.3	.3	.3	.4	.3	.4	.3
AVERAGE	.2	.2	.3	.2	.3	.2	.3	.4	.3	.4	.3

[1] Based on "successful" hunter reports each year.

MOOSE KILL / SQ. KM

Albert, Carleton, Charlotte, Gloucester

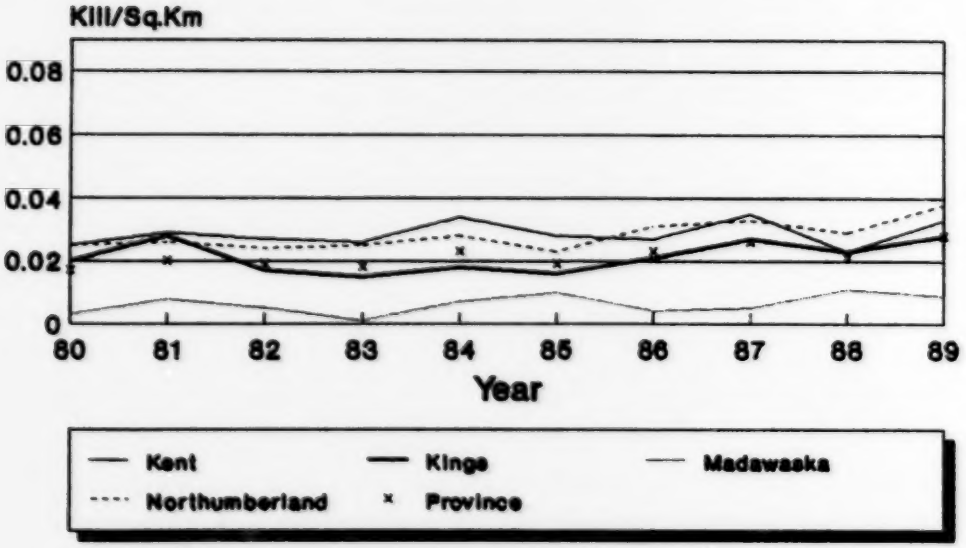
1980 - 89 New Brunswick



MOOSE KILL / SQ. KM

Kent, Kings, Madawaska, Northumberland

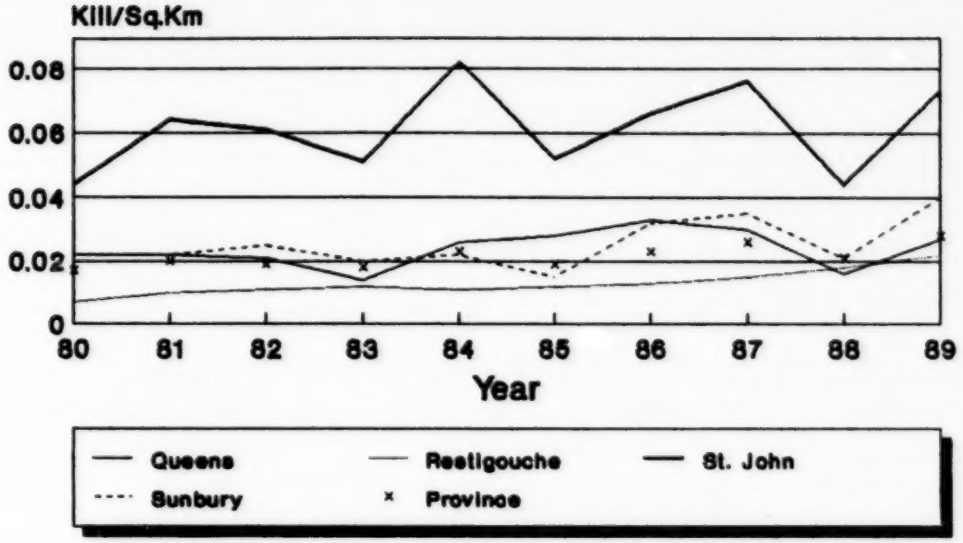
1980 - 89 New Brunswick



MOOSE KILL / SQ. KM

Queens, Restigouche, St. John, Sunbury

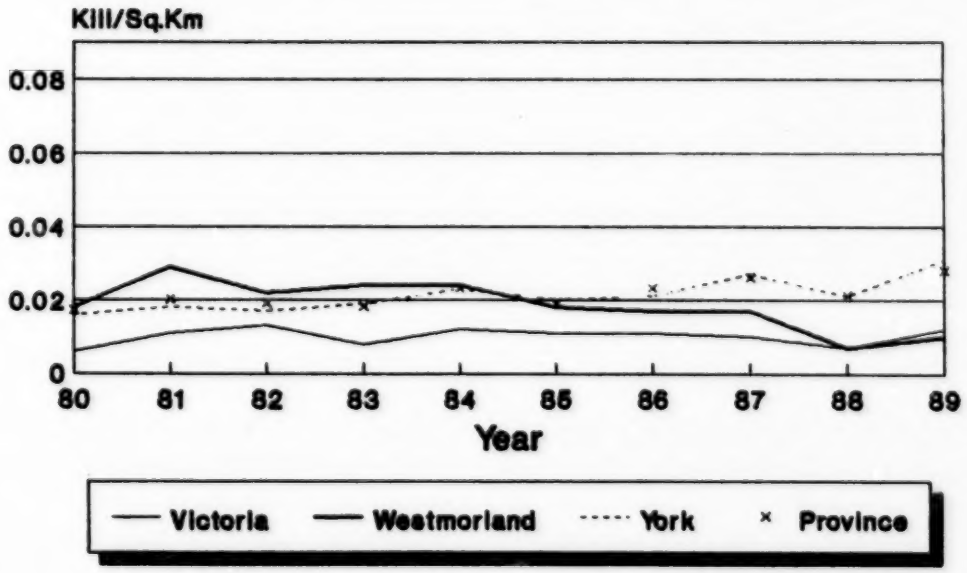
1980 - 89 New Brunswick



MOOSE KILL / SQ. KM

Victoria, Westmorland, York

1980 - 89 New Brunswick



AGE AND SEX OF MOOSE HARVESTED

1960 - 1989

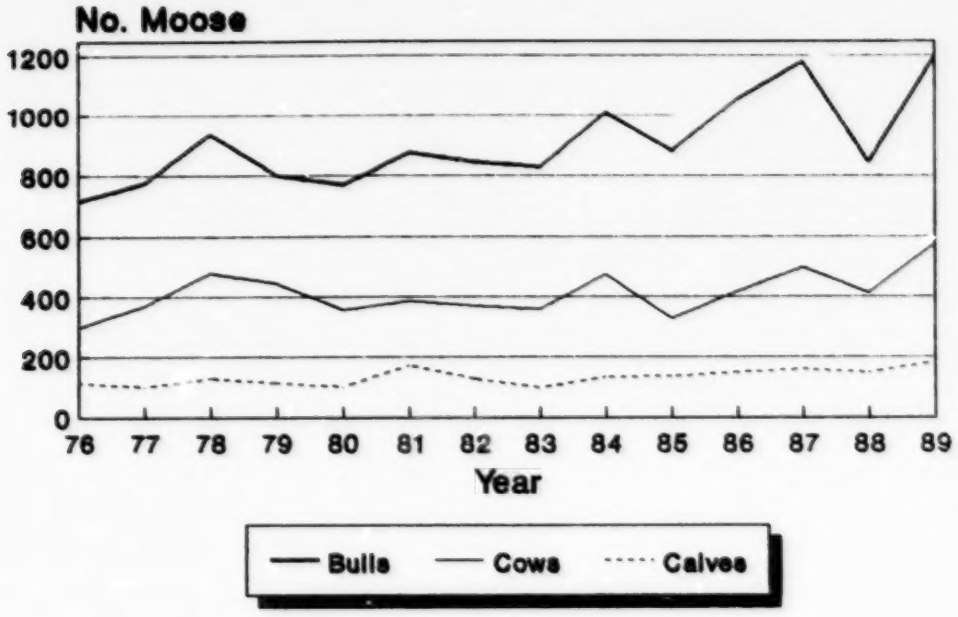
New Brunswick

	Adult & Yearling		Calf			
Year	Bull	Cow	Male	Female	Unkn.	Total
	[Moose season was closed in 1936 and reopened in 1960]					
1960*	174	0	0	0		174
1961	262	0	0	0		262
1962	297	0	0	0		297
1963	296	0	0	0		296
1964	307	0	0	0		307
1965	314	0	0	0		314
1966	----------Not Available----------					606
1967	----------Not Available----------					469
1968**	472	192	33	27		724
1969	455	191	29	32		707
1970	547	236	24	51		858
1971	574	273	38	46		931
1972	702	261	35	45		1,043
1973	745	296	40	46		1,127
1974	680	284	57	64		1,085
1975	607	284	25	53		969
1976	716	298	53	64		1,131
1977	773	370	46	57		1,246
1978	936	480	58	71		1,547
1979	800	444	50	66		1,360
1980	770	357	49	54		1,230
1981	874	388	63	111		1,436
1982	844	370	60	70		1,344
1983	826	360	45	56		1,287
1984	1,008	475	56	79		1,618
1985	880	328	85	53		1,346
1986	1,055	418	71	81		1,625
1987	1,181	497	72	88		1,838
1988	843	413	77	75	65	1,473
1989	1,199	575	81	105	62	2,022

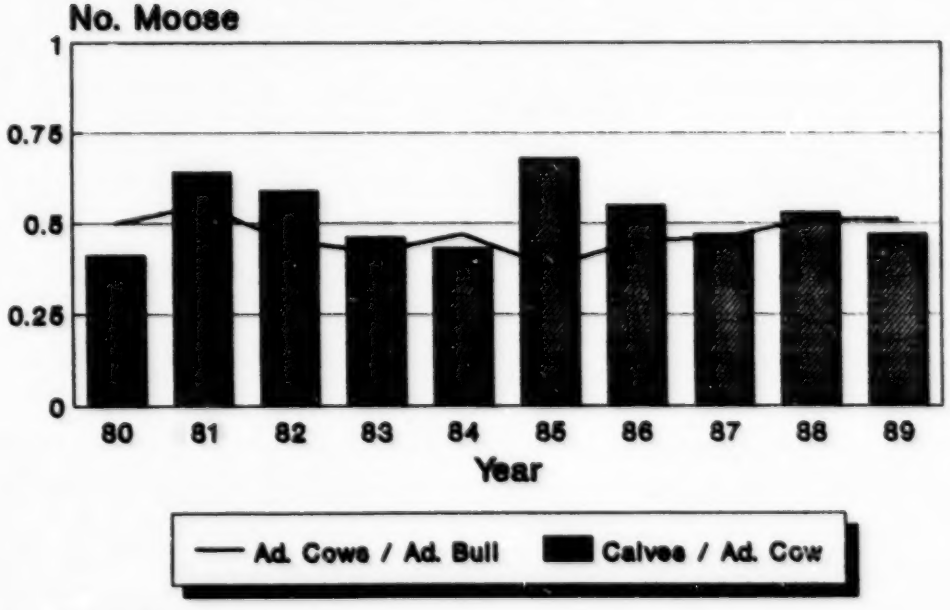
* Bulls-only season from 1960 to 1967.

** Either-sex hunting began in 1968 to present.

AGE AND SEX STRUCTURE OF MOOSE HARVEST
1976 - 89 New Brunswick

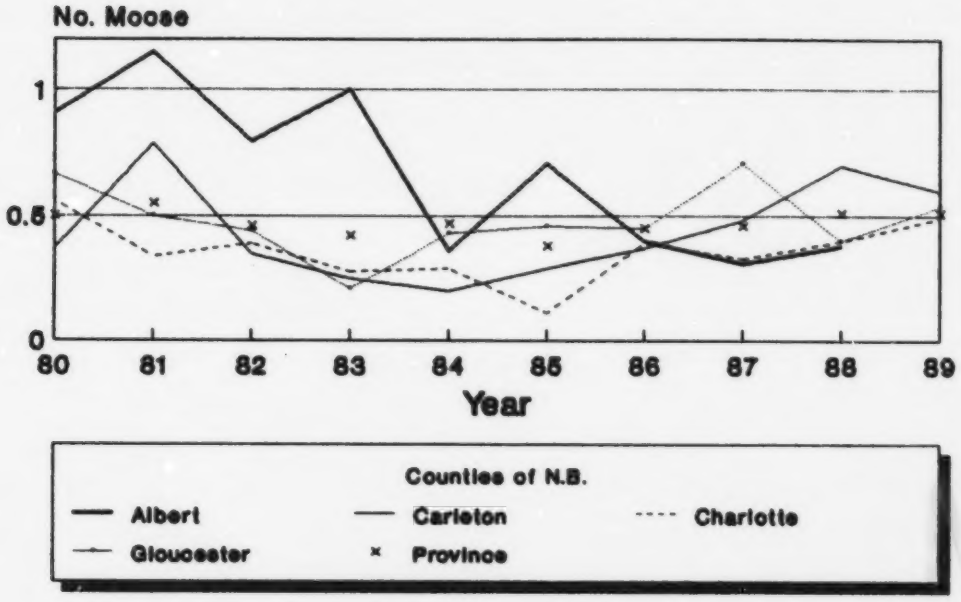


MOOSE PRODUCTIVITY RATIOS
1980 - 89 New Brunswick



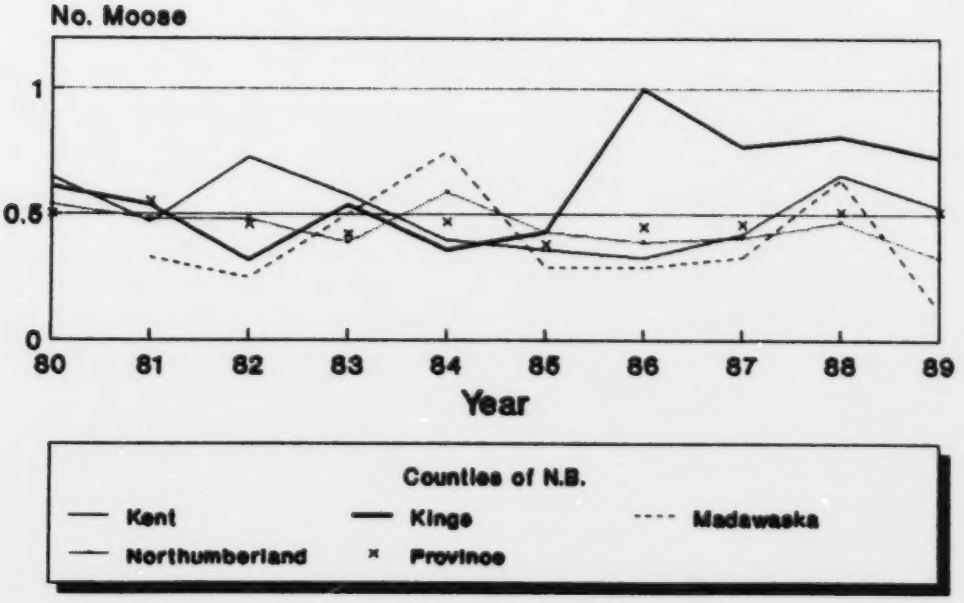
-from harvest data

COW : BULL RATIOS 1980-89
ALBERT, CARLETON, CHARLOTTE, GLOUCESTER



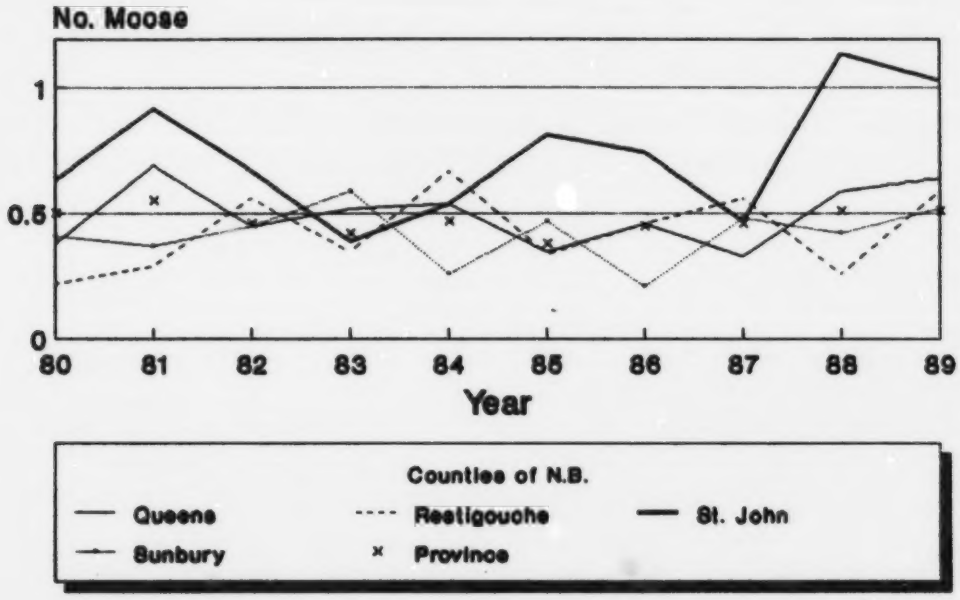
-from harvest data (adults only)

COW : BULL RATIOS 1980-89
KENT, KINGS, MADAWASKA, NORTHUMBERLAND



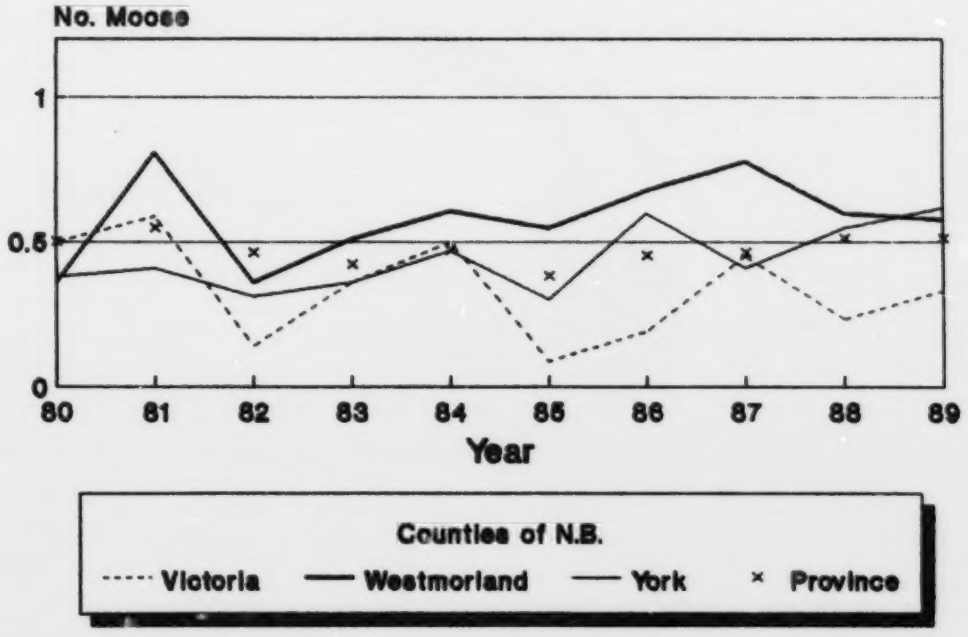
-from harvest data (adults only)

COW : BULL RATIOS 1980-89
QUEENS, RESTIGOUCHE, ST. JOHN, SUNBURY



-from harvest data (adults only)

COW : BULL RATIOS 1980-89
VICTORIA, WESTMORLAND, YORK



-from harvest data (adults only)

SEX AND AGE OF MOOSE HARVESTED BY COUNTY

New Brunswick 1989

	MALE				FEMALE				Unkn.	
COUNTY	Ad.	Ylg.	Calf	Age Unkn.	Ad.	Ylg.	Calf	Age Unkn.	Sex/ Age	TOTAL
Albert*	0	0	0	0	0	0	0	0	0	0
Carleton	25	23	2	0	15	8	6	0	0	79
Charlotte	53	29	5	0	26	9	5	0	0	127
Gloucester	65	31	6	12	35	16	7	5	1	178
Kent	55	36	12	1	29	13	3	0	0	149
Kings	40	12	3	0	29	6	10	0	0	100
Madawaska	16	4	0	3	2	3	0	0	4	32
Northumb.	214	96	15	14	70	34	17	1	0	461
Queens	36	20	3	0	23	9	8	0	0	99
Restig.	59	47	10	9	35	14	5	0	8	187
St. John	30	20	7	0	31	14	11	0	0	113
Sunbury	48	21	1	0	25	9	7	0	0	111
Victoria	27	15	4	3	9	5	4	0	1	68
Westmorl.	12	8	1	0	7	2	6	0	0	36
York	104	53	12	0	64	33	16	0	0	282
PROVINCE TOTALS	784	415	81	42	400	175	105	6	14	2022

* Albert County was within the closed Zone 24.

WEIGHTS OF MOOSE
1986 - 88 NEW BRUNSWICK

MALE WEIGHTS (Kilograms)*

Age	Average Weight	S.D.	Range	N
Calf	113	15	91 - 136	7
1.5	202	27	141 - 255	46
2.5	283	53	191 - 393	73
3.5	332	24	191 - 397	37
4.5	338	33	291 - 400	15
5.5	311	37	273 - 364	5
6.5	310	77	255 - 364	2
7.5	-	-	- -	-
8.5+	340	34	316 - 364	2

FEMALE WEIGHTS (Kilograms)

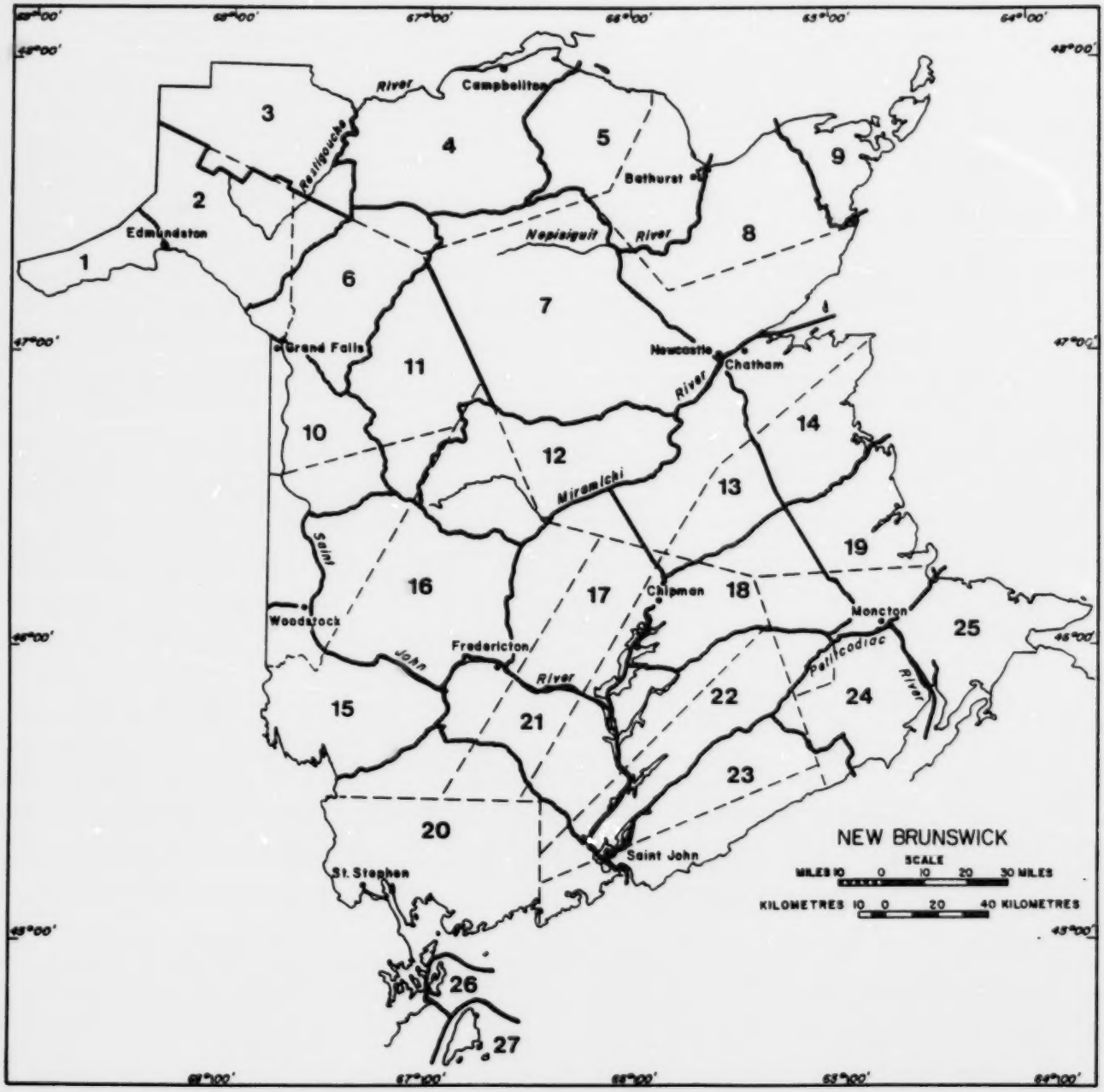
Age	Average Weight	S.D.	Range	N
Calf	100	19	72 - 127	13
1.5	179	35	105 - 234	40
2.5	227	39	166 - 300	23
3.5	249	36	186 - 309	23
4.5	242	18	223 - 273	5
5.5	249	11	241 - 257	2
6.5	-	-	- -	-
7.5	-	-	- -	-
8.5+	-	-	- -	-

*Weights were obtained from moose registered at Fredericton.

To convert "kilograms" to "pounds", multiply by 2.2

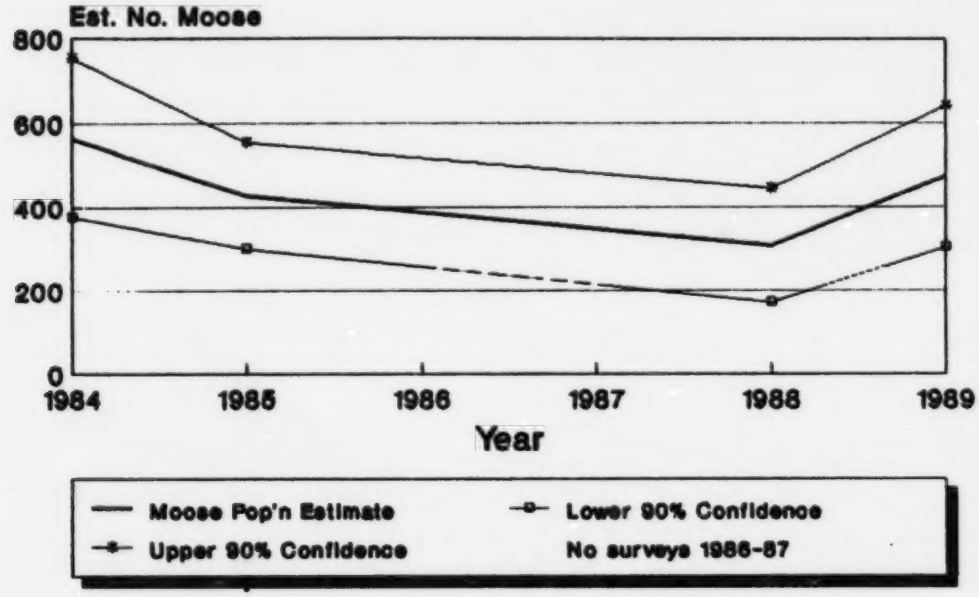
"S.D." refers to standard deviation.
"Range" is the range of weights measured for a particular sex and age class.
"N" refers to sample size.

WILDLIFE MANAGEMENT ZONES



ZONES D'AMÉNAGEMENT DE LA FAUNE

W.M.Z. 18 - LAKESTREAM MANAGEMENT ZONE
Moose Population Estimates



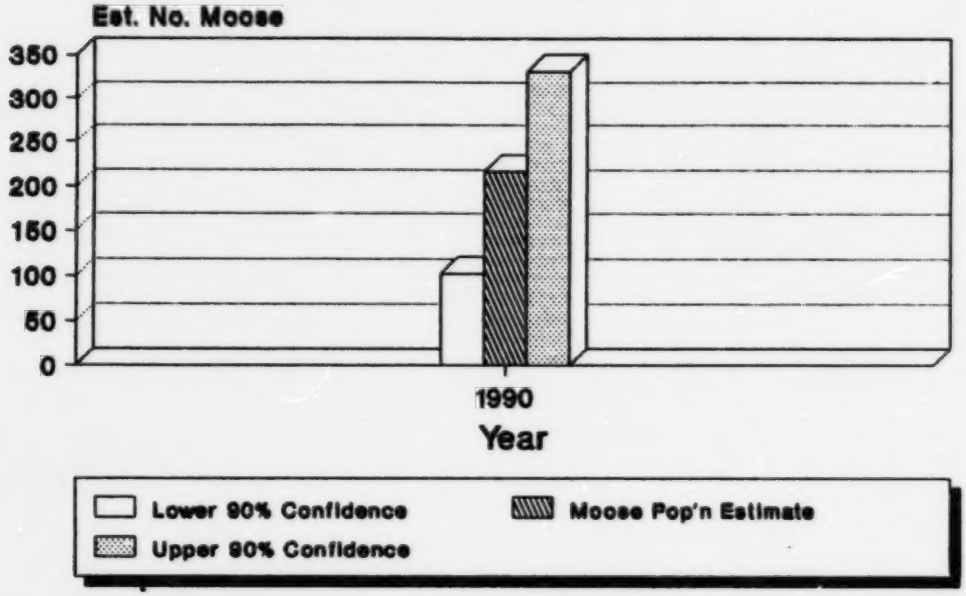
-helicopter surveys Jan.-March

SUMMARY OF 1989 AERIAL MOOSE CENSUS
W.M.Z. 18 - Lakestream Mgmt. Zone

DATES FLOWN	# BLOCKS CENSUSED	BULLS	COWS	CALVES	UNKNOWN AGGREGATE	TOTAL
28 Jan.	8	9	6	2	1	19
8 Feb.	6	19	15	6	0	40
7 Mar.	6	2	3	2	4	15
20 Mar.	6	3	6	3	1	14
Totals	26	33	30	13	6	88

[average aggregate size = 2 moose]

W.M.Z. 24 - EAST FUNDY MANAGEMENT ZONE
Moose Population Estimate 1990



-helicopter surveys Feb.-March

SUMMARY OF 1990 AERIAL MOOSE CENSUS
W.M.Z. 24 - East Fundy Mgmt. Zone

DATES FLOWN	# BLOCKS CENSUSED	BULLS	COWS	CALVES	UNKNOWN AGGREGATE	TOTAL
26 Feb.	6	0	1	0	1 moose	2
27 Feb.	4	4	2	3	0	9
7 Mar.	4	0	3	1	3 moose + 5 aggr.	17
Totals	14	4	6	4	5 aggr. + 4 moose	28

[average aggregate size = 2 moose]

NUMBER OF MOOSE REGISTERED AT D.N.R.& E. OFFICES

New Brunswick - 1989

Location	No. Moose Reg'd	Location	No. Moose Reg'd
Allardville	47	Perth	15
Baker Brook	11	Petit-Rocher	0
Balmoral	42	Petitcodiac	17
Bathurst	186	Plaster Rock	50
Bertrand	21	Rogersville	48
Blackville	30	Sackville	27
Boiestown	43	St. George	57
Buctouche	28	Saint John	51
Campbellton	19	St-Laurent	34
Canterbury	94	St-Leonard	30
Chipman	16	St-Louis-de-Kent	33
Coles Island	19	St-Quentin	19
Doaktown	43	St. Stephen	59
Edmundston	62	Stanley	22
Fredericton	136	Sunny Corner	44
Gordonsville	67	Sussex	73
Hampton	30	Tracadie	22
Harcourt	66	Welsford	89
Hexham	21	Woodstock	0
Hillsboro	0		
Kedgwick	28	Unknown Office	15
Lancaster	40		
McGraw Brook	39	TOTAL	2022
Minto	41		
Moncton	23	Average No. Moose Reg'd	
Nackawic	49	per Office (1989)	
Nash Creek	18	= 42	
Newcastle	98		